

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF SOUTH CAROLINA  
GREENVILLE DIVISION

BLUE CROSS AND BLUE SHIELD  
OF SOUTH CAROLINA,

PLAINTIFF,

VERSUS

W.R. GRACE & CO.-CONN.,

DEFENDANT.

C/A NO. 6:89-1287-1

BEFORE:

THE HON. JOSEPH F. ANDERSON, JR.,  
U.S. DISTRICT JUDGE

GREENVILLE, S.C.  
MAY 30, 1991

VOLUME XI  
TRANSCRIPT OF JURY TRIAL

APPEARANCES:

FOR THE PLAINTIFF:

DANIEL SPEIGHTS, ESQ.  
CHARLES ALAN RUNYAN, ESQ.  
P.O. BOX 685  
HAMPTON, S.C. 29924

FOR THE DEFENDANT:

L. GRAY GEDDIE, JR., ESQ.  
300 NORTH MAIN STREET  
GREENVILLE, S.C. 29602

LOUIS C. WOOLF, ESQ.  
900 GAY STREET, S.W., SUITE 2200  
KNOXVILLE, TENNESSEE 37902

1 DIRECT , THAT'S CORRECT, SIR.

2 Q. DR. LONGO, BASED UPON YOUR EXPERIENCE, NUMBER OF YEARS  
3 YOU WORKED WITH TEM, THE NUMBER OF YEARS YOU HAVE DONE  
4 ASBESTOS SAMPLING, THE NUMBER OF YEARS YOU HAVE DONE DUST  
5 SAMPLING AND THE WORK THAT YOU HAVE DONE, WOULD YOU TELL THE  
6 JURY WHAT THE COMPARISON IS BETWEEN SONICATING A SAMPLE AND  
7 NOT SONICATING A DUST SAMPLE?

8 A. THE COMPARISONS ARE LITERALLY COMPARABLE. IF YOU TAKE  
9 EXAMPLE, IF WE TAKE A GROUP OF SAMPLES AND TAKE ONE OR TWO AND  
10 USE THE ALCOHOL PREP AND NO SONIFICATION WHICH WOULD BE  
11 DIFFERENT FROM THE WATER PREP AND SONIFICATION, THE RESULTS  
12 ARE RIGHT IN THE MIDDLE THERE SOMEWHERE, SO THEY ARE NOT THE  
13 HIGHEST AND THEY ARE NOT THE LOWEST, SO THEY ARE COMPARABLE.

14 Q. LET ME FOLLOW UP ON THAT A LITTLE BIT. WHAT IS THE  
15 PURPOSE OF SONIFICATION?

16 A. WELL, WHEN YOU PUT THESE MATERIALS IN WATER THE PURPOSE  
17 OF SONIFICATION IS TO GET EVEN DISTRIBUTION. THE ASBESTOS OR  
18 CHRYSOTILE HAS A SURFACE CHARGE ON IT, SO WHEN YOU PUT IN  
19 WATER THEY TEND TO ATTRACT EACH OTHER. WE FOUND THAT THESE  
20 SAMPLES IN WATER IF YOU SONIFICATE IT YOU ARE ABLE TO GET A  
21 MORE HOMOGENEOUS DISTRIBUTION. SO YOU ARE GETTING THE  
22 STRUCTURE SPREAD OUT SO YOU CAN FILTER IN A MORE EVEN MANNER.

23 Q. HAVING DONE THAT WITH A DUST SAMPLE, WHY DON'T YOU DO A  
24 DIRECT PREPARATION?

25 A. WELL, UNFORTUNATELY IN THESE DUST SAMPLES THERE IS SO

1 MUCH AS STOS AND SO MUCH MATERIAL, IT COMPLETELY OVERLOADS  
2 THE FILTERS, YOU COULD NEVER LOOK THROUGH IT. IT WOULD BE  
3 TRYING TO-- IT WOULD BE TRYING TO WALK THROUGH THIS COURTROOM  
4 WITH YOUR EYES CLOSED AND TRYING TO ANALYZE EVERYTHING.

5 YOU HAVE TO GET THE ASBESTOS DOWN TO A POINT WHERE  
6 YOU HAVE SINGLE FIBERS. A GOOD ANALOGY OF THIS IS IF YOU HAD  
7 SO MUCH ASBESTOS IT WOULD BE LIKE LOOKING AT A PLATE OF  
8 SPAGHETTI AND TRYING TO DETERMINE HOW MANY STRANDS ARE THERE.  
9 NOW IF I TAKE THAT PLATE OF SPAGHETTI AND I SPREAD IT OUT OR  
10 PUT IN WATER AND DILUTE IT NOW I CAN COUNT THOSE INDIVIDUAL  
11 SPAGHETTI FIBERS OR ASBESTOS FIBERS. SO THAT'S WHY WE DO THAT.  
12 SIR.

13 Q. ONE MORE LINE OF QUESTIONING, DR. LONGO, THERE'S BEEN  
14 SOME TESTIMONY SPECIFICALLY BY DR. LEE THAT SONIFICATION, AND  
15 I MAY MISSTATE THIS, BUT I BELIEVE HE SAID IT EXPLODES FIBERS  
16 OR BREAKS THEM UP, DO YOU AGREE WITH THAT?

17 A. NO, SIR. ASBESTOS FIBERS HAVE A TENSILE STRENGTH OF  
18 100,000 P S I. THEY ARE NOT BREAKING APART OR EXPLODING. I  
19 THINK YOUR GLASS BEAKERS WOULD EXPLODE WAY BEFORE THEN.

20 Q. DR. LONGO, LET'S JUST ASSUME FOR THE SAKE OF ARGUMENT  
21 THAT ASBESTOS FIBERS WERE BEING BROKEN UP WITH SONIFICATION,  
22 WHAT WOULD YOU EXPECT THE RESULTS TO SHOW AS COMPARED TO ONE  
23 THAT WASN'T SONICATED, IF THAT WAS HAPPENING?

24 A. WELL, IF YOU CAN LOOK AT IT THIS WAY, LET'S GO BACK TO  
25 THE SPAGHETTI. IF YOU HAD DRIED SPAGHETTI AND SAY IT WAS THIS

1 TALL AND I HAD A HUNDRED STALKS OF SPAGHETTI THIS TALL AND I  
2 HAD EXPLODED THEM ALL UP. SO WHAT I WOULD BE DOING IS TAKING  
3 THEM AND BREAKING THEM UP AND PRETTY SOON I WOULD HAVE ALL  
4 SPAGHETTI FIBERS THIS TALL. SO YOU WOULD GO FROM ALL THESE  
5 BIG TALL SPAGHETTI FIBERS TO ALL THESE SMALL ONES. SO YOU  
6 WOULD EXPECT TO HAVE NO BIG SPAGHETTI FIBERS OR NO BIG  
7 ASBESTOS FIBERS.

8 THAT'S NOT WHAT HAPPENS WHEN WE SEE SONIFICATION. I  
9 SEE THAT THE SIZE DISTRIBUTION OF OUR BIG FIBERS AND OUR  
10 LITTLE FIBERS STAY THE SAME. AND IN THAT WORK WE HAVE  
11 DEMONSTRATED OVER AND OVER-- IN FACT THAT BOOK YOU ARE HOLDING  
12 ALSO SUGGESTS THAT'S WHAT IS HAPPENING. SO, THE SIZE  
13 DISTRIBUTION DOES NOT CHANGE. IF YOU ARE BREAKING OR  
14 EXPLODING THINGS UP OR MAKING THEM SMALLER, YOU HAVE TO GET A  
15 WHOLE BUNCH OF SMALL ONES AND NO BIG ONES AND THAT DOES NOT  
16 HAPPEN.

17 Q. IS THAT ALSO THE CASE WITH THE NUMBER OF MATRICES AND  
18 CLUSTERS AND BUNDLES?

19 A. WE SEE THE SAME SIZE DISTRIBUTIONS. SO IN FACT WE FEEL WE  
20 ARE GETTING A MORE BETTER HOMOGENEOUS DISTRIBUTION. WE ARE  
21 ABLE TO SEE ALL THE STRUCTURES BETTER.

22 Q. DR. LONGO, IS YOUR TESTIMONY CONSISTENT WITH THIS  
23 DOCUMENT?

24 A. YES, SIR.

25 Q. AND WHAT IS THIS DOCUMENT?

1 A. TH1 IS COMPARISONS OF AIRBORN ASBESTOS LEVELS  
2 DETERMINED BY TRANSMISSION ELECTRON MICROSCOPY USING THE  
3 INDIRECT AND DIRECT TECHNIQUE, WHICH IS AN EPA DOCUMENT THAT  
4 CAME OUT LATE LAST YEAR.

5 MR. WOOLF: ALREADY BEEN TESTIFIED TO.

6 MR. RUNYAN: THAT WAS IT.

7 THE COURT: CROSS EXAMINATION.

8 CROSS EXAMINATION

9 BY MR. WOOLF:

10 Q. EVERYBODY HAS BEEN HANDING ME QUESTIONS, MR. LONGO, YOU  
11 HAVE TESTIFIED FOR PLAINTIFF'S ATTORNEYS BEFORE IN CASES?

12 A. YES, SIR.

13 Q. YOU HAVE TESTIFIED FOR PLAINTIFF'S ATTORNEYS IN CASES  
14 BEFORE THIS CASE EVEN STARTED?

15 A. YES, SIR. THAT'S CORRECT.

16 Q. YOU ARE ON THE WITNESS LIST IN THIS CASE?

17 A. YES, SIR.

18 Q. YOU HAVE BEEN AVAILABLE TO TESTIFY DURING THE COURSE OF  
19 THE TRIAL?

20 A. I DON'T KNOW IF I HAVE BEEN AVAILABLE, I HAVE BEEN DOING  
21 OTHER THINGS, BUT I GUESS I WAS ON THE WITNESS LIST, THAT'S  
22 CORRECT, SIR.

23 Q. SO, YOU HAVE BEEN AVAILABLE?

24 A. IF IT COULD HAVE WORKED TO MY SCHEDULE I COULD HAVE BEEN.

25 Q. HAD PLAINTIFF'S ATTORNEYS ASKED YOU TO BE HERE ANY TIME